REMARKS

Claims 1-29 are pending in this application. All of the pending claims are rejected. None of the claims are currently amended. Reconsideration and further examination are respectfully requested.

Claims 1-29 are rejected under 35 U.S.C. 103(a) as being obvious based upon EP 1100013 (Maes) in view of US 6314415 (Mukherjee). Maes describes a "conversational markup language" which translates "conversational gestures." More particularly, content originally presented in one markup language is translated into a different markup language so that it can be presented on a different device, e.g., rendering a web page on a cell phone. The translation may change the way content is presented because different devices and markup languages have different limitations. Mukherjee describes dynamic GUI generation. More particularly, selection of features for display is automated. The Office must consider each claim as a whole, but with regard to the novel and non-obvious step of "determining the invocation sequence of the identified update functions for each trigger question by using the activation network" the rejection relies upon Maes at 0018, 0022 and 0108-0109, and Mukherjee at figures 3A-3L and column 2:19 through column 3:5. Applicant will focus on that limitation in order to narrow the issues presented.

The pending claims are related to the sequence in which update functions are invoked by automated document generation systems. Automated document generation systems typically generate a customized document such as a legal contract by using a template and answers submitted in response to a questionnaire form. For example, a user without legal expertise would input answers to questions posed by the questionnaire, and those answers would be used to generate a document from the template by selecting particular clauses of legal significance to

include or exclude along with other content that may always be included. Questionnaires have

been used for other purposes and it is now known that different questions can be related in the

sense that the answer to one question may determine or change the possible answers to another

question, or invalidate the other question entirely. For example, if the answer to the question

"gender?" is "male" then the answer to "title?" must be "Mr." and the question "pregnant?" is

invalid. Similarly, if the answer to "title?" is "Mr." then "gender?" is "male" and "pregnant?" is

invalid. This basic condition is described in the specification[1] as follows:

> the form in Figure 1a illustrates a typical form that may be generated by a
> document generation program. The example chosen is that of providing details of
> a buyer in a purchase contract. Similar forms may be generated by other types of
> form generators, such as database engines, for example, Oracle 8i™. These forms
> all have an element of dynamic behaviour in common, in that answering a
> question or providing a variable or value affects other questions appearing on the
> form.

However, simply knowing that questions are related is insufficient because answers may be

hierarchically related and the order in which the answers to questions are used can affect the

result. For example, if "state of incorporation?" is Delaware and "state of residence?" is

Massachusetts then a jurisdiction clause selected based on the question "jurisdiction?" may end

up being **either** Delaware **or** Massachusetts based on the order in which the questions are

answered.[2] This is described in the specification[3] as follows:

> The problem to be addressed is in what sequence all the update functions are
> invoked for each different trigger element. In order to determine these invocation
> sequences an activation network is constructed from the form elements (the nodes
> on the network) and the update functions (the arrows connecting the nodes).

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[1] Page 8, line 23 through page 9, line 3
[2] More typically, each question is assigned a value based on its answer, and the order in which those values are
applied to the template (invoked) after all of the questions have been asked and answered causes the difficulty rather
than the order in which the questions are asked or answered. The order of answering is used to illustrate the
problem because it conveys the same principle in more easily understandable terms, i.e., what would happen if
update functions were invoked as questions were answered.
[3] Page 11, lines 21-25

This invention seeks to mitigate such unacceptably random results by determining the sequence in which to invoke update functions by identifying the trigger questions and then using an activation network to select the invocation sequence for the update functions associated with those trigger questions. As described in the specification[4]:

> The order in which each update is carried out is determined by the condition that all functions which lead to an update of an element are carried out before that element is subsequently used to update another: all functions corresponding to arrows entering a form element must be completed before the function corresponding to an arrow leaving the form element can be executed.

One embodiment of this feature is described in the specification[5] as:

> The sequence in which update functions are invoked (the invocation sequence) for each trigger element is determined by a breadth-first expansion of the activation network. In this expansion, any acyclic path of length N from a first node X to a second node Y is expanded into a path of length N+1 from the first node X to a third node Z by appending a path of length 1 from the second node Y to the third node Z.

It will therefore be appreciated that the invention recited in the pending claims not only determines whether questions are related but also determines an invocation sequence for applying the answers to those questions. Consequently, creating a questionnaire or adding questions to an existing questionnaire is enhanced via automation.

Turning now to the rejections, there is no suggestion in the references of determining an invocation sequence of update functions for each trigger question by using the activation network. Paragraph 0018 of Maes simply describes how the different modalities (browsers) are synchronized, e.g., when a user provides input via mobile browser "A," that input is immediately

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[4] Page 13, lines 1 through 5
[5] Page 12, lines 17 through 22

translated into corresponding input for standard browser "B." Note that the order in which that input is supplied is driven manually by the user, and the order in which input is invoked is not even considered. Applicant is unable to determine how the other paragraphs of Maes are being applied, but even the characterization of the examiner that "upon identifying an update function, the CML interpreter determines the CML function to be invoked to handle the update" does not meet the recited limitation of determining an *invocation sequence*. In other words, finding *the* CML function corresponding to an update function does not yield a *sequence of functions*. Mukherjee recognizes that questions can be related, but fails to recognize that the order in which the answers to questions are used can also change the result. Mukherjee also fails to describe determining how answers to questions are hierarchically related. In sum, neither reference provides any suggestion of determining an invocation sequence of identified update functions for each trigger question by using an activation network.

Claims 1, 15 and 16 distinguish the cited combination for the reasons stated above. Claims 2-14 and 17-29 further distinguish the invention and are allowable for the same reasons as their respective base claims. This application is therefore considered to be in condition for allowance and such action is earnestly solicited. Should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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